Project Code and Title

B.02.02.12 Assess Safety of Automotive Adaptive Equipment

Project Objective

The research proposed will provide a technical foundation for the evaluation of the functionality of and the injury potential from equipment installed to make motor vehicles assessable to persons with disabilities, including allowing them to drive.

Background

NHTSA has limited experience with adaptive driving equipment. There are no FMVSS directly regulating adaptive driving controls or combinations of equipment that may result in an unsafe vehicle adaptation. In theory, each device used to replace the function of equipment originally provided by the vehicle manufacturer should pass the applicable FMVSS. Otherwise the installer of that equipment would be guilty of "rendering inoperative" a device installed in a vehicle in compliance with FMVSS. Historically, NHTSA has responded to questions regarding installation of adaptive equipment, and whether it will comply with FMVSS, by considering any violation as justified by public need, if it was done in the adaptation of a vehicle for a disabled driver. The Centers for Disease Control estimates that 211,000 Americans use some sort of adaptive equipment in their vehicles. NHTSA established the Working Group on Automotive Safety for Persons with Disabilities (WGASPD) in April of 1994 to familiarize the agency with the needs and problems of persons with disabilities who use motor vehicles.

Problem Definition

Very little data are available for crashes involving persons with disabilities. This project attempts to be proactive and adress potential safety problems before they occur. These problems are anticipated due to the growing number of vehicle operators who have some disability. The project will monitor the problem and react accordingly.

Research Approach

Proposed research will use data collected from NASS special case studies, vehicle modifiers who are member of the National Mobility Equipment Dealers Association (NMEDA) reporting on crashes of clients' vehicles, and sled testing. Component and crash testing may also be used. NASS data will be monitored to see if crashes involving modified vehicles appear there. Codes for adaptive equipment are available in NASS beginning in 1995.

Potential Impact/Application

Improved auto safety for persons with disabilities. Sensitizing the agency to the needs of persons with disabilities and making changes in the FMVSS where possible and appropriate.

RESOURCE REQUIREMENTS	FY95	FY96	FY97	FY98	FY 99
Contract Money ($K)	0	220	220	220	220

Project Manager(s)

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Completion Date

Ongoing

Keywords: drivers, disabilities, steering control device, vehicle modifications

Project Tasks

Task Title and Description

1. Accident Data
- 1a: Accident Case Studies
- 1b: Monitor Real-world Experience through NMEDA members
- 1c: NASS Data Analysis

2. Testing and Analysis
- 2a: Conduct Sled Testing
- 2b: Component Testing
- 2c: Full-scale Testing

3. Literature Review (NPS)

Task	Start Date	Projected Completion Date	Status/Responsibility
1a	4/94	Indefinite	
1b	4/95	Indefinite	
1c	1/95	Indefinite	
2a	2/96	12/96	
2b	TBD	Indefinite	
2c	TBD	Indefinite	
3	4/94	Indefinite	

Supporting Contracts

Task	Contract Number	COTR (phone)	Contracting Officer (phone)	Total Contract Cost ($K)
2a		E. Swanson		220